

### **REMARKS/ARGUMENTS**

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 4, 6-14 and 20-22 are presently pending in this application, Claims 11-19 having been withdrawn from further consideration by the Examiner, Claims 2, 3, 5 and 15-19 having been canceled, Claim 1 having been amended and Claims 20-22 having been newly added by the present amendment.

In the outstanding Office Action, Claims 1-4, 7 and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by JP 11-130822 (hereinafter “JP ‘822”); and Claims 1-10 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over DE 19532229 (hereinafter “DE ‘229”) or JP 03-227489 (hereinafter “JP ‘489”) or Charmot et al. (U.S. Publication 2005/0063918).

Claim 1 has been amended and Claims 20-22 have been added herein. These amendments and additions in the claims find support in the specification and/or claims as originally filed, for example, the specification, page 7, lines 11-13 and lines 22-25, and page 10, lines 2-5, and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the rejections based on the cited references, a brief review of Claim 1 as currently amended is believed to be helpful. Claim 1 is directed to a water-soluble resin and recites: “a structure corresponding to a copolymer of a monomer mixture containing a vinylic monomer (A) having a hydroxyl group and an amido bond, and a vinylic monomer (B) having a cationic group, wherein the vinylic monomer (A) is represented by a formula,  $\text{CH}_2=\text{C}(\text{R}^1)-\text{CO}-\text{NR}^2-(\text{CH}_2)_a-\text{OH}$ , where  $\text{R}^1$  represents a hydrogen atom or a methyl group,  $\text{R}^2$  represents a hydrogen atom, or an alkyl group or a hydroxyalkyl group having 1 to 4

carbon atoms, a is 2, and the vinylic monomer (B) is represented by a formula,  $\text{CH}_2=\text{C}(\text{R}^3)\text{-CO}(\text{O})_b\text{-(NH)}_{1-b}\text{-(CH}_2)_c\text{-N}^+\text{R}^4\text{R}^5\text{R}^6\cdot\text{X}^-$ , where  $\text{R}^3$  represents a hydrogen atom or a methyl group,  $\text{R}^4$  and  $\text{R}^5$  each independently represent an alkyl group or an aryl group or an aralkyl group having 1 to 24 carbon atoms,  $\text{R}^6$  represents a hydrogen atom, an alkyl group or an aryl group or an aralkyl group having 1 to 24 carbon atoms, or  $\text{CH}_2\text{-CH(OH)-CH}_2\text{-N}^+\text{R}^7\text{R}^8\text{R}^9\cdot\text{Y}^-$ ,  $\text{R}^7$  to  $\text{R}^9$  each independently represent an alkyl group or an aryl group or an aralkyl group having 1 to 24 carbon atoms,  $\text{X}^-$  and  $\text{Y}^-$  each independently represent an anion, b represents 0 or 1, and c represents an integer from 1 to 10.”

It is respectfully submitted that none of JP ‘822, DE ‘229, JP ‘489 and Charmot et al. teaches or suggests “a copolymer of a monomer mixture containing a vinylic monomer (A) having a hydroxyl group and an amido bond, and a vinylic monomer (B) having a cationic group, wherein the vinylic monomer (A) is represented by a formula,  $\text{CH}_2=\text{C}(\text{R}^1)\text{-CO-NR}^2\text{-(CH}_2)_a\text{-OH}$ , where  $\text{R}^1$  represents a hydrogen atom or a methyl group,  $\text{R}^2$  represents a hydrogen atom, or an alkyl group or a hydroxyalkyl group having 1 to 4 carbon atoms, a is 2, and the vinylic monomer (B) is represented by a formula,  $\text{CH}_2=\text{C}(\text{R}^3)\text{-CO}(\text{O})_b\text{-(NH)}_{1-b}\text{-(CH}_2)_c\text{-N}^+\text{R}^4\text{R}^5\text{R}^6\cdot\text{X}^-$ , where  $\text{R}^3$  represents a hydrogen atom or a methyl group,  $\text{R}^4$  and  $\text{R}^5$  each independently represent an alkyl group or an aryl group or an aralkyl group having 1 to 24 carbon atoms,  $\text{R}^6$  represents a hydrogen atom, an alkyl group or an aryl group or an aralkyl group having 1 to 24 carbon atoms, or  $\text{CH}_2\text{-CH(OH)-CH}_2\text{-N}^+\text{R}^7\text{R}^8\text{R}^9\cdot\text{Y}^-$ ,  $\text{R}^7$  to  $\text{R}^9$  each independently represent an alkyl group or an aryl group or an aralkyl group having 1 to 24 carbon atoms,  $\text{X}^-$  and  $\text{Y}^-$  each independently represent an anion, b represents 0 or 1, and c represents an integer from 1 to 10” as recited in amended Claim 1.

More specifically, JP ‘822 is directed to a moisturizer which retains its effect against sweat, water and wash and describes the general formula (1) which contains Y showing a divalent saturated hydrocarbon group of the carbon numbers 1-10 which may be substituted

by a hydroxyl group. On the other hand, the vinylic monomer (B) as recited in Claim 1 contains  $R^6$  which represents a hydrogen atom, an alkyl group or an aryl group or an aralkyl group having 1 to 24 carbon atoms, or  $CH_2-CH(OH)-CH_2-N^+R^7R^8R^9\cdot Y^-$ . Thus, the formula (1) in JP '822 is structurally different from the structural unit derived from the vinylic monomer (B) recited in Claim 1. Also, the examples in Applicants' specification exhibit that the absorption amount of silicone oil becomes larger with the water-soluble resin according to Claim 1 and that the water-soluble resin according to Claim 1 shows excellent results in lathering, smooth feel in rinsing, silky feel after dried and softness after dried. Hence, it is seen that the water-soluble resin according to Claim 1 achieves superior adhesion of silicone oil on hairs without a rough feel. It is also pointed out that the claimed invention solves problems and provides effects different from those described in JP '822. As stated above, the problem and effect addressed in JP '822 are to provide moisturizer having improved moistness and feel and to keep moistness against sweat, water and washing.<sup>1</sup>

DE '229 is directed to a water-soluble polymer dispersion and simply lists a broad spectrum of monomers which may be used as material for that polymer. And DE '229 does not provides suggestion for selecting the combination of the vinylic monomer (A) and the vinylic monomer (B) as recited in Claim 1. It is also pointed out that the claimed invention is in a field distinct from that of DE '229, *i.e.*, DE '229 describes a water-soluble polymer dispersion as discussed above.

JP '489 is directed to a papermaking additive and describes that the variation in the paper-strengthening effect is reduced with respect to a variation in the papermaking pH and that a variation in the paper-making strengthening effect is small with respect to the dissolved constituents in the pulp slurry. Furthermore, referring to Table 3 of Applicants' specification, Example 4 (a copolymer derived from DMAPAAC and HEAA) shows a significantly larger

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<sup>1</sup> See, for example, JP '822, paragraphs 0001 to 0005.

absorption of silicone oil and excellent results in silky feel and softness when compared to Example 10 (a copolymer derived from DMAPAAC and NMAA). JP '489 describes N-methylol(meth)acrylamide (NMAA) and methacryloyloxyethyl-N, N, N-trimethylammonium chloride but the vinylic monomer (A) and the vinylic monomer (B) as recited in amended Claim 1 are not believed to read on to these compounds.

Charmot et al. is directed to an oral composition including a polymer for effective delivery to the oral surfaces during brushing and merely describes N-[tirs(hydroxymethyl)methyl]acrylamide (THMMAM) as a monomer for that polymer. The vinylic monomer (A) as recited in Claim 1 is not believed to read on to this compound.

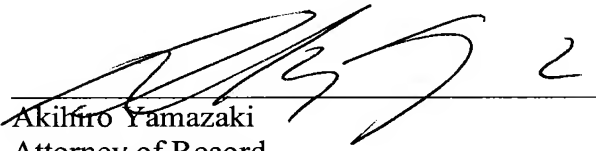
Therefore, the structure recited in amended Claim 1 is clearly distinguishable from JP '822, DE '229, JP '489 and Charmot et al., and because none of these references discloses the structure as recited in amended Claim 1, their teachings even combined would not render the water-soluble resin recited in Claim 1 obvious.

For the foregoing reasons, Claim 1 is believed to be allowable. Furthermore, since Claims 4, 6-14 and 20-22 depend directly or indirectly from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 4, 6-14 and 20-22 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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MAIER & NEUSTADT, L.L.P.

A handwritten signature in black ink, appearing to read 'Akifuro Yamazaki', is written over a horizontal line. To the right of the signature is a small handwritten mark resembling a '2'.

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